Message

From: MacNicholl, Peter@DTSC [Peter.MacNicholl@dtsc.ca.gov]

Sent: 7/26/2018 4:47:45 PM

To: Fennessy, Christopher [christopher.fennessy@Rocket.com]; MacDonald, Alex@Waterboards

[Alex.MacDonald@waterboards.ca.gov]; Keller, Lynn [Keller.Lynn@epa.gov]

Subject: Re: [EXTERNAL] Re: Aerojet Area 40 - Cleanup Tables

Thanks Chris.

From: Fennessy, Christopher <christopher.fennessy@Rocket.com>

Sent: Thursday, July 26, 2018 8:29:35 AM

To: MacDonald, Alex@Waterboards; MacNicholl, Peter@DTSC; Keller, Lynn (Keller.Lynn@epa.gov)

Subject: FW: [EXTERNAL] Re: Aerojet Area 40 - Cleanup Tables

These are the most recent versions of the table and text that I have. Table sent by Peter with following e-mail (7/19/18 at 5:17pm) and text sent by Peter in email to same group on 7/19/18 at 3:26pm.

Christopher M. Fennessy, P.E. Aerojet Rocketdyne, Inc.

Engineering Manager, Site Remediation 11260 Pyrites Way, Suite 125 Rancho Cordova, CA 95670

Ph: 916-355-3341 Fax: 916-355-6145

Email: Christopher.Fennessy@Rocket.com

From: MacNicholl, Peter@DTSC [mailto:Peter.MacNicholl@dtsc.ca.gov]

Sent: Thursday, July 19, 2018 5:17 PM

To: jaheple@dcn.org; 'tsao115@gmail.com'; Stephen Green

Cc: Hanley, Valerie@DTSC; MacDonald, Alex@Waterboards; Keller, Lynn (Keller.Lynn@epa.gov);

'Stralka.Daniel@epa.gov'; Fennessy, Christopher

Subject: [EXTERNAL] Re: Aerojet Area 40 - Cleanup Tables

Thank you all.

FYI I just noted one error on the combined table provided to the group, it was an old version. The Park W/ Structures - "Groundwater to Indoor Air" should read "15" ug/L. Please see the attached table as this is a most recent version. Thank you.

-Pete

From: MacNicholl, Peter@DTSC

Sent: Thursday, July 19, 2018 3:25:33 PM

To: jaheple@dcn.org; 'tsao115@gmail.com'; Stephen Green

Cc: Hanley, Valerie@DTSC; MacDonald, Alex@Waterboards; Keller, Lynn (Keller.Lynn@epa.gov);

'Stralka.Daniel@epa.gov'; Fennessy, Christopher (christopher.fennessy@Rocket.com)

(christopher.fennessy@Rocket.com) **Subject:** Aerojet Area 40 - Cleanup Tables

Hi All,

The project team has developed two cleanup tables for the Area 40 cleanup. One table (which you've seen) is the "Final Cleanup Goals" table, which are final goals that are expected to be achieved and may take a long-time to meet after implementing Alternative 4. The other table "Protective Values" table (which you're seeing today) is a modeling effort that presents interim goals that may be achieved in a shorter timeframe, will ultimately support specific reuse and but also require Site specific evaluations to the "actual" level of protectiveness they support (vapor mitigation systems being one example).

For example, the Residential Final Cleanup Goal for TCE of 16 ug/m^3 (soil vapor to indoor air) meets the standards for no vapor mitigation requirements, but the RAP remedy identifies vapor mitigation as a component of the remedy, so the evaluation will assess whether the systems will actually provide a two order of magnitude protection ($100 \times 16 \text{ ug/m}^3$) = 1600 ug/m^3 as the literature presents? This is when the actual Site specific evaluation will be conducted to assess how effective these vapor systems can be. Additionally, the "Protectiveness Values" table includes groundwater values to outdoor air, soil vapor to groundwater (protection of GW), and ecological standards for soil vapors to burrows.

Accompanying these two tables (Final Cleanup Goals & Protective Values) is a third table which is nothing more than both tables combined into one. The agencies would like input from the CAG on whether they feel the "Protective Values" table should be included in the RAP, and if so separate or combined with Final Cleanup Goals (Combined Table). Obviously, the Final Cleanup Goals are not the Protective Values so DTSC was thinking it would be best to keep them separate. Also attached to this email is the "Remedy Outline" which identifies the various receptors, exposure routes, assumptions, and any other considerations used to develop the standards for the Site.

Please contact me in the interim as your questions on these tables are generated. DTSC will be in attendance at the CAG meeting and intend to have our Toxicologist present to help address any concerns or questions that the CAG may have on the tables and methodologies used to calculate both the protective values and cleanup goals.

Thank you for your considerations and talk with you soon.

Peter MacNicholl, P.E.

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